

A composite image of the solar system. In the top left, a portion of Earth is visible. Below it, the Moon orbits. To the right, Mars is shown. In the bottom right, Jupiter is depicted. A comet with a long tail streaks across the upper right. The background is a deep blue space filled with stars.

1st Annual NASA/JPL Small Business Symposium & Awards Ceremony

Plenary Session Title

***Supporting NASA Science Missions
Jet Propulsion Laboratory***

***Rigo Medina
Project Acquisition Manager
November 17, 2008***





Jet Propulsion Laboratory

- Mission Statement:

As part of the NASA team, JPL enables the nation to explore space for the benefit of humankind by developing robotic space missions to:

- Explore our own and neighboring planetary systems.
- Search for life beyond the Earth's confines.
- Further our understanding of the origins and evolution of the universe and the laws that govern it.
- Make critical measurements to understand our home planet and help protect its environment.
- Enable a virtual presence throughout the solar system using the Deep Space Network and evolving it to the Interplanetary Network of the future.
- Apply JPL's unique skills to address problems of national significance.
- Inspire the next generation of explorers.



Jet Propulsion Laboratory

The Seven JPL Businesses

Sponsored by SMD



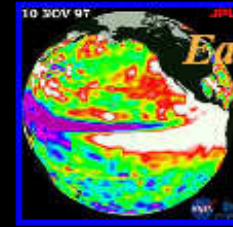
**Solar
System**



Mars



Astrophysics



Earth

Sponsored by SOMD



DSN

Sponsored by ESMD



ESTO

Sponsored by non-NASA



NSTA



Jet Propulsion Laboratory

Three Implementation Modes

"In-House"



Cassini



MER

MSL



System Contracted



DS-1



MRO



Dawn



Kepler



Hybrid



SIM



JPL Project Acquisition Mgmt Office

- Project Acquisition Management Office provides acquisition planning Support to JPL Flight Project Offices that will enable respective projects to meet its mission objectives and provide the best value to NASA.

- Diversity Goals and Objectives:

Ensure that Project's integrated acquisition strategy is in compliance with NASA policies regarding small business subcontracting requirements and JPL best business practices.

- Priority Considerations

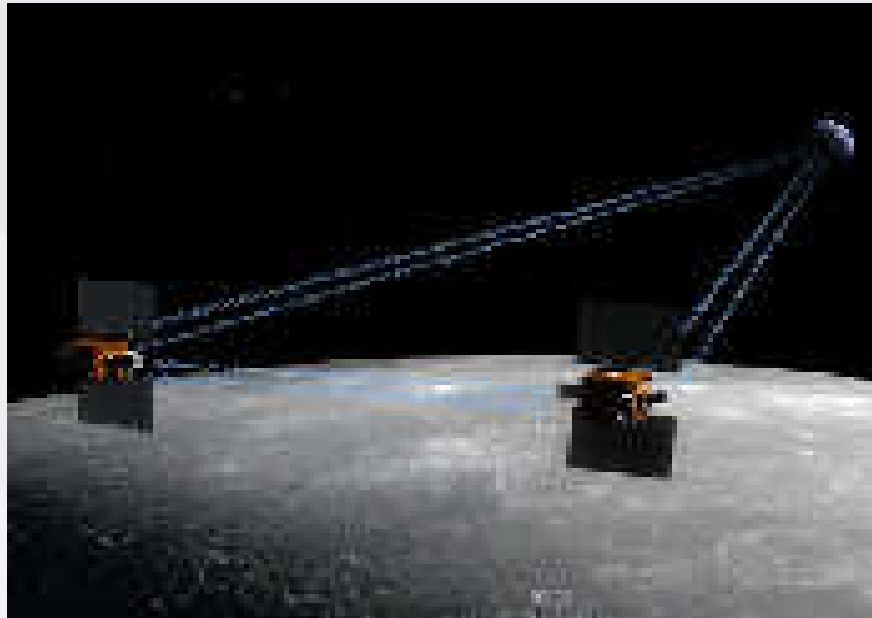
SB's WOSB's HUBZone
SDB's VOSB's SDVOSB's
HBCU / MI



Current Projects and Initiatives

- Title of Project

Gravity Recovery and Interior Laboratory (GRAIL)





Current Projects and Initiatives

- Project overview

The GRAIL mission is a part of NASA's Discovery Program. It will cost \$375 million and is scheduled to launch in 2011. GRAIL will fly twin spacecraft in tandem orbits around the moon for several months to measure its gravity field in unprecedented detail. The mission also will answer longstanding questions about Earth's moon and provide scientists a better understanding of how Earth and other rocky planets in the solar system formed. GRAIL will support NASA's exploration goals as the agency returns humans to the moon by 2020.

- JPL will manage the GRAIL mission. The spacecraft will be built by Lockheed Martin Space Systems, Denver.





Major Project Procurements

- Spacecrafts and Ground Support Equip. -- Lockheed Martin
- Education & Public Outreach Program. MIT - Sally Ride Science
- MoonKam Cameras, including Digital Video Systems
-- Ecliptic Enterprises
- Microwave Assembly, part of Lunar Gravity Ranging System (LGRS) instrument (in house development).
-- Space Systems Loral
- Ultra-Stable Oscillator (part of LGRS)
-- Johns Hopkins' Applied Physics Lab (APL)
- Gravity Processing Assembly DC-DC converters
-- JPL purchase orders to be competitively selected
- Ka-band Antenna Horn Assembly (part of LGRS)
-- Custom Microwave Inc.



- Title of Project:

Soil Moisture Active and Passive (SMAP)





Soil Moisture Active and Passive

- PROJECT OVERVIEW

SMAP will provide a capability for global mapping of soil moisture and freeze/thaw state with unprecedented accuracy, resolution, and coverage. The scientific objectives of SMAP are to acquire space-based hydrosphere state measurements over a three-year period to:

- Understand processes that link the terrestrial water, energy and carbon cycles
- Estimate global water and energy fluxes at the land surface
- Quantify net carbon flux in boreal landscapes
- Enhance weather and climate forecast skill
- Develop improved flood prediction and drought monitoring capabilities





Major SMAP Procurements

- Instrumentation Reflector and Boom Assembly
- Spin Mechanism Assembly with slip rings or rotation transformers
- S-band Telemetry Transceivers or Transponders
- X-band high rate mission data transmitters
- Mission data recorder
- Star Trackers
- Flight Computer
- Propulsion Components / Thrusters
- Solar Arrays
- Batteries





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